

Pipeline Safety and Environmental Regulations Affecting Gas Distribution

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the voice and choice of public gas

American Public Gas Association

- ~1000 community-owned gas systems
 - 37 states
 - > ~5 Million Customers
 - > ~21,000 Employees
 - > ~120,000 Miles of Main
- Systems size (Meters): 12 to ~500,000*
- Largest cities: Philadelphia*, San Antonio, Indianapolis, Memphis, Long Beach, Richmond, Colorado Springs, Mesa
- Freedom, OK (12 meters)
- * In the process of going private



Items I'll Cover





- Pipeline Safety Act Reauthorization
- Public Awareness
- Operator Qualification
- Excess Flow Valves
- Integrity Management
- Pipeline Safety Management Systems
- Methane Emissions



But First...





- Two new APGA programs
 - -SOAR
 - -Benchmarking



SOAR Program





- SOAR = System Operations Achievement Recognition
- Give recognition to those APGA members that have demonstrated a culture of operational excellence
- Every APGA member can earn the recognition, if they meet the criteria



Four General Areas





- Operational excellence is measured in 4 areas:
 - –System Integrity
 - –Employee Safety
 - –Workforce Development
 - -System Improvement
- Many of the PSMS elements are also SOAR criteria

WINNERS





- First, there are no SOAR losers
- Recognition will be granted at three levels of accomplishment:
 - -Bronze (80-89%),
 - -Silver (90-96%) or
 - -Gold (>97%) level achievers.
- Criteria for Small Systems in some areas will be developed and applied



2014 WINNERS





GOLD

- City of Tallahassee Florida
- City of Mesa Arizona
- Okaloosa Florida Gas District, Florida

SILVER

- Chambersburg Pennsylvania
- York County South Carolina
- Norwich Connecticut Public Utilities
- Westfield Massachusetts Gas and Electric
- Greenwood, South Carolina
- Middle Tennessee Natural Gas Utility District
- Rocky Mount North Carolina Public Utilities



2014 WINNERS





- SILVER, continued
 - Memphis Tennessee Light Gas and Water
 - Hutchinson Kansas Utilities Commission
 - Lancaster Ohio Municipal Gas

BRONZE

- Clearwater Florida Gas
- Austin Minnesota Utilities
- Powell Clinch Tennessee Utilities District
- City of Ellensburg Washington
- City Utilities of Springfield Missouri
- Huntsville Alabama Utilities
- Long Beach California Gas and Oil
- Pensacola Florida Energy



Benchmarking



- Online system allows APGA members to compare their system with peers
- Peers can be all ~ 1,300 LDCs or a user defined subgroup (Within state, public-only, size range)
- Based on OPS, EIA and APGA survey data
- Can compare in ~ 100 benchmarks, including:
 - Leaks repaired/mile by cause
 - Excavation damages/ticket
 - Unaccounted for gas
 - % steel mains, services that are bare
 - % cast iron main
 - And 95 more operational and financial benchmarks



Pipeline Safety Reauthorization

- Pipeline Safety Act authorizes PHMSA to regulate and appropriates annual budget
- Typically reauthorized for 4 years
- Last reauthorization through 2015
- Hearings and draft bills will begin early in 2015
- Expected topics:
 - Leak management and cast iron/bare steel
 - Leftovers from San Bruno
 - Whatever causes the next pipeline accident



Federal Regulation the voice and choice of public gas

- Impact on public gas is often an afterthought when federal regulations are developed
- Public awareness, control room management, RP 1173, PHMSA Leak Detection Study all were written to address transmission and oil pipleine problems
- Public awareness was even applied to master meter and small LP operators until APGA petition
- APGA hopes future rulemakings will consider needs for small systems separate from large

Public Awareness

- July 9, 1986 Mounds View, MN accident
- June 10, 1999 Bellingham, WA accident
- Pipeline Safety Improvement Act of 2002
- 2003 API RP 1162
- PHMSA Final rule: May 19, 2005
- As a result of the San Bruno accident, PHMSA is focusing on effectiveness assessment
- No new rules backdoor via enforcement and advisory bulletins

APGA GOAL

- Gas Overall Awareness Level (GOAL)
- Public awareness effectiveness assessment for customers and
- Surveys since 2006 for ~ 200 utilities (29 in lowa)
- Participating utilities receive report for their area plus nationwide aggregated data for all GOAL users
- Sample size selected to ensure validity
- You can still sign up



Operator Qualification

- Rumor mill says there is a secret effort to redefine who can evaluate OQ tasks
- One OQ vendor emailed its evaluators with new evaluator qualifications:
 - Must have performed a task for >= 3 years in order to perform hands-on evaluation
- APGA supports qualified evaluators, but ...
- APGA does not agree that evaluators must have performed the tasks the evaluate
- No new rules backdoor via enforcement and advisory bulletins

Excess Flow Valves





- Current rules require EFVs on new and replaced service lines to single residences (with a few exceptions)
- Congress required PHMSA to consider extending the requirement to new and replaced multi-family, commercial, industrial services
- PHMSA convened a group of industry, manufacturers, regulators and public to advise it

Excess Flow Valves



- A proposed rule is imminent
- APGA and AGA suggested:
- (2) A branched service line to a SFR installed concurrently with the primary SFR service line. (A single EFV may be installed to protect both service lines);
- (3) A branched service line to a SFR installed off a previously installed SFR service line that does not contain an EFV;
- (4) Multi-family installations, including duplexes, triplexes and fourplexes with known customer loads at time of service installation, based on installed meter capacity, up to 1,000 standard cubic feet per hour (SCFH) per service and where the customer load is not expected to increase significantly over time; or
- (5) A single small commercial customer with known customer load at the time of service installation, based on installed meter capacity, up to 1,000 SCFH served by a single service line and where the customer load is not expected to increase significantly over time.

DIMP





- New implementation inspection form
- PHMSA Sept 4 Webinar
- No new rules backdoor via enforcement and advisory bulletins
- APGA SIF is addressing implications for SHRIMP
- SHRIMP will meet letter of the rule and regulator expectations



New DIMP Inspection Form the voice and choice of public gas

- New PHMSA Form 24 DIMP Implementation Inspection Form
- Old form (22) verified operators' DIMP plans met rule requirements
- Form 24 is primarily to verify operators are following through on DIMP plan actions



New DIMP Inspection Form the voice and choice of public gas

- The Records Review questions are to be performed on records used by an operator for implementing its DIMP plan.
- The Field Observation questions are to be used on field activities being performed by an operator in support of its DIMP plan. Field Observation inspection activities may also include review of data, environmental conditions, and assumptions being used by an operator in support of its DIMP plan.



New DIMP Inspection Form

- Is the operator collecting the missing or incomplete system information and data needed to fill knowledge gaps to assess existing and potential threats?
- Is the operator collecting the missing or incomplete system information and data <u>using</u> the procedures prescribed in its DIMP plan?
- Has the operator incorporated into the DIMP plan any new or missing information identified or acquired during normal operations, maintenance, and inspection activities?



New DIMP Inspection Form

- Do operator personnel in the field understand their responsibilities under DIMP plan? (Below are possible questions for field personnel)
- Would you explain what DIMP training you have received?
- What instructions have you received to address the discovery of pipe or components not documented in the company records?
- What instructions have you received if you find a possible issue? (ex: corrosion, dented pipe, poor fusion joints, missing coating, excavation damage, mechanical fitting failures)

Performance Evaluation

- October 15, 2014 PHMSA issues Advisory Bulletin on performance metrics
- Advisory references another internal PHMSA document
- No opportunity for public review and comment on either the advisory nor the internal document
- Document "creates no new legal obligations
- But advisory says it will be the criteria for enforcement



Performance Evaluation

- Comment filed on proposed DIMP rule
- "Proposed documentation requirements were seen as unreasonably burdensome. In particular, the proposed requirements to document "all" decisions and changes related to a distribution integrity management (IM) program and to keep all related records for the life of the pipeline were seen as unreasonable"
- NAPSR: "Documents to support any decision, analysis or process used to develop each element of the IM program is excessive, onerous and not cost effective"



Updates

- 45 updates to SHRIMP have been made since 8/2/2011
- Latest update Yesterday
- If users have not rerun their plan it will not include latest updates
- We alert users to changes via the alert feature in SHRIMP, by email and at:

http://www.apgasif.org

Previous Stop Next



Threat Assessment and Risk Model Changes

- Will consider statistical differences in leaks/mile and damages/ticket
- Added problem materials: PVC, ABS, Driscopipe 8000
- Natural Forces Mandatory sub-sectioning if any problem areas are identified
- Totally revamp excavation damage threat
- All threat-sections will be listed in the risk-ranking section of the plan regardless of level of risk

Previous Stop Next

Previous

Stop

Next



Natural Forces Threat Assessment Changes

•	Check all that occur in areas where you have pipelines:	
	☐ Subsidence,	
	☐ Frost heave,	
	□ Earthquakes,	
	□ Landslides/mudslide,	
	☐ Lightning,	
	☐ Flooding,	
	Scouring/washouts due to flowing water	
	☐ Falling chunks of snow or ice	
	High winds/hurricanes/tornados	
	Other natural causes not listed above. (If they choose this, when goi through the sectioning ask to describe the natural forces threat.	ng

Natural Forces Threat Assessment Changes

- Create as many sub-sections as necessary for each checked subthreat
- For each subsection, user will be asked to:
 - Assign a name
 - Define the geographic boundaries where the subthreat exists
 - Enter the miles of main and # of services
 - Answer threat assessment questions

Previous Stop Next



Tracking and Analyzing Performance Measures

- Will include a database to store data on each numeric, time-series, threat-specific SHRIMP performance measures
- Will use the Mann-Kendall test to analyze for trends
- Will specify the baseline

Previous Stop Next



Changes to Written Plan

- List all answers that increase or decrease the risk ranking score and by how much
- Group by "Factors Affecting Probability" and "Factors Affecting Consequence"
- Subgroup by "Factors Indicating Actual Threats" and "Factors Indicating Potential Threats"
- List answers to business district question under subheading "Environmental factors"

Previous Stop	Next	
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Changes to Risk Ranking chapter

- All threat-sections will appear in Risk Ranking regardless of relative risk, even those with a score of "1"
- Users may re-rank any and all threat-sections
- This will make it clear that all 8 threats were evaluated for 100% of the system



Future Improvements to SHRIMP

- Continue to encourage feedback from state inspections and users
- Review issues raised in September 4 DIMP Webcast
- Advisory group includes both industry and NAPSR experts

Previous Stop Next

Sept 4 PHMSA Webinar

- Pipeline Safety Management Systems and Safety Culture are inherent in DIMP
- Sufficient system subdivision must be considered for the evaluation and ranking of risks present in the operator's unique operating environment.
- Must address potential threats and "interactive" potential threats
- http://primis.phmsa.dot.gov/dimp/meetings.htm



Interactive Potential Threats

- Examples:
- Slow crack growth in older plastics where pipeline was pinched during operational event or where over-squeeze occurred due to improper tools or procedure
- Slow crack growth in older plastics where non-modern construction practices were used
- Areas of possible soil washouts and subsidence with cast iron mains



PSMS: RP 1173



- Result of a hazardous liquid accident
- APGA supports effective safety management systems for public gas systems
- All ten elements in the draft RP 1173 are applicable for public gas, however ...
- RP 1173 is geared toward managing safety in large pipeline operations with thousands of widely dispersed employees
- It is written in language most public gas system managers would find foreign
- It would be difficult, if not impossible for most public gas systems to adopt RP 1173



PSMS Elements



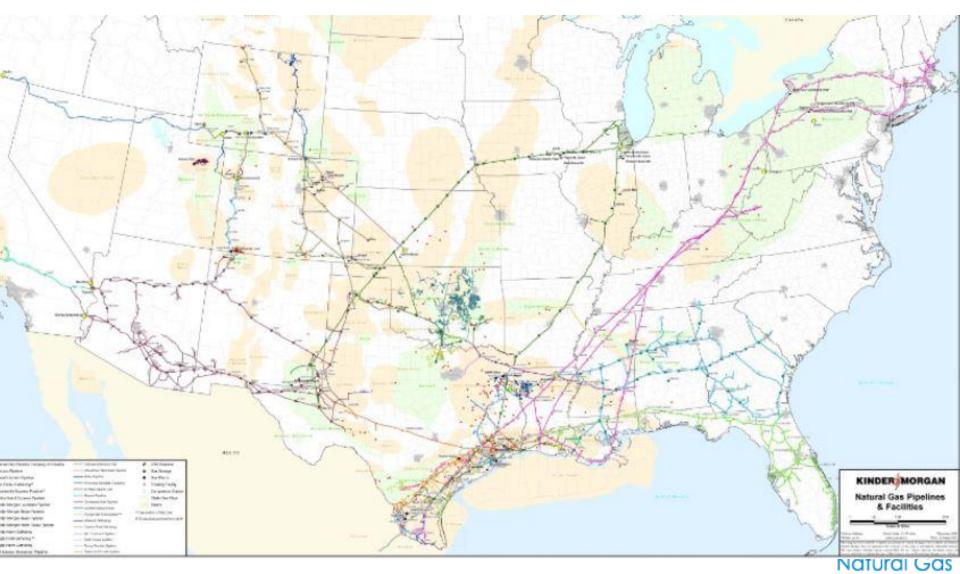


- Management Leadership and Commitment
- Risk Management
- Operational Controls
- Incident Investigation, Evaluation and Lessons Learned
- Safety Assurance or Continuous Improvement
- Safety Management System Monitoring,
 Measurement, Analysis and Improvement
- Training, Qualification and Development
- Emergency Preparedness and Response
- Stakeholder Engagement



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- 11,000 employees
- 80,000 miles of pipe
- Transports natural gas, refined petroleum products, crude oil, carbon dioxide (CO2) and more
- 5 employees
- 50 miles of pipe
- Transports natural gas (and water)

SMS for Public Gas

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- APGA is making lemonade from lemons, writing SMS guidance for public gas
- Keeping all 10 elements, but writing it addressed to public gas system needs
- Translating it into utility-friendly terms
- For example, leadership element is recast as advice to a new utility board or city council member, or to a new utility supervisor on how their words and deeds can foster or inhibit a safety culture

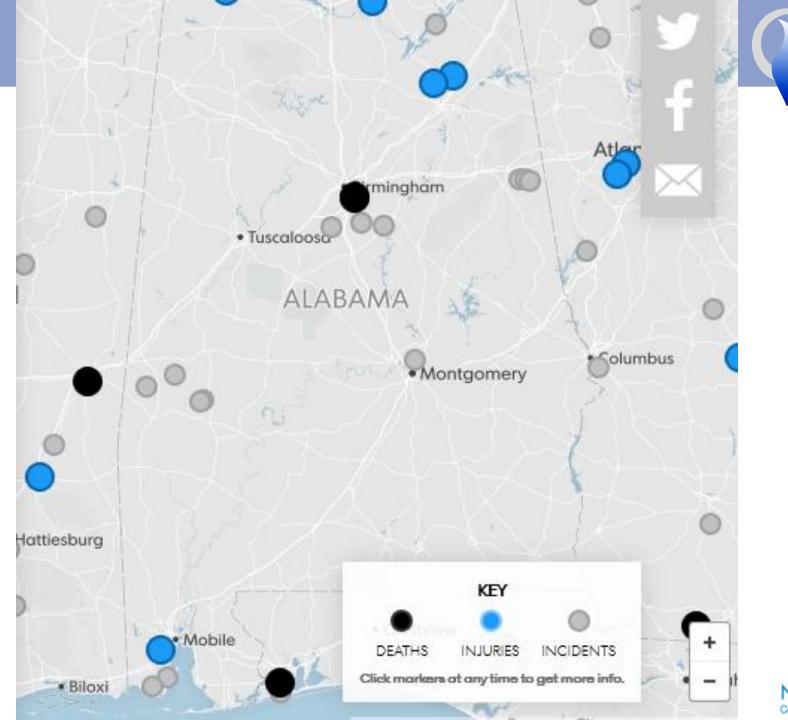
Methane Emissions



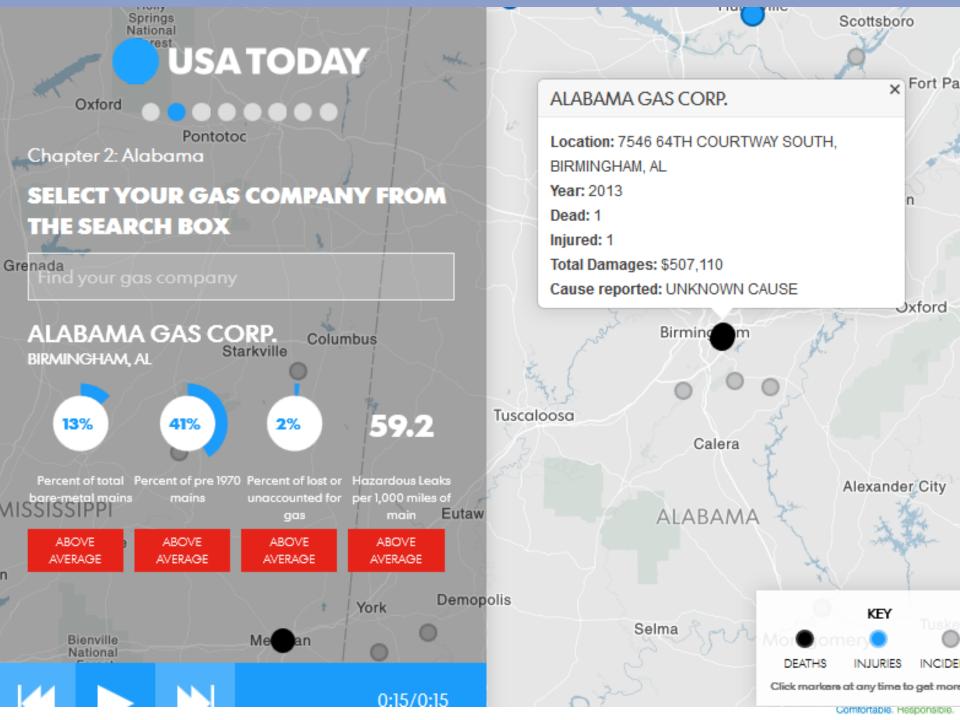


- USA Today and affiliates are focusing on natural gas safety
- Particular focus on cast iron and bare steel
- Also on Unaccounted-For Gas
- Public can search county for incidents and utility for:
 - % Bare steel mains
 - % Pre-1970 mains
 - % Lost and unaccounted for gas
 - # of hazardous leaks/mile of main









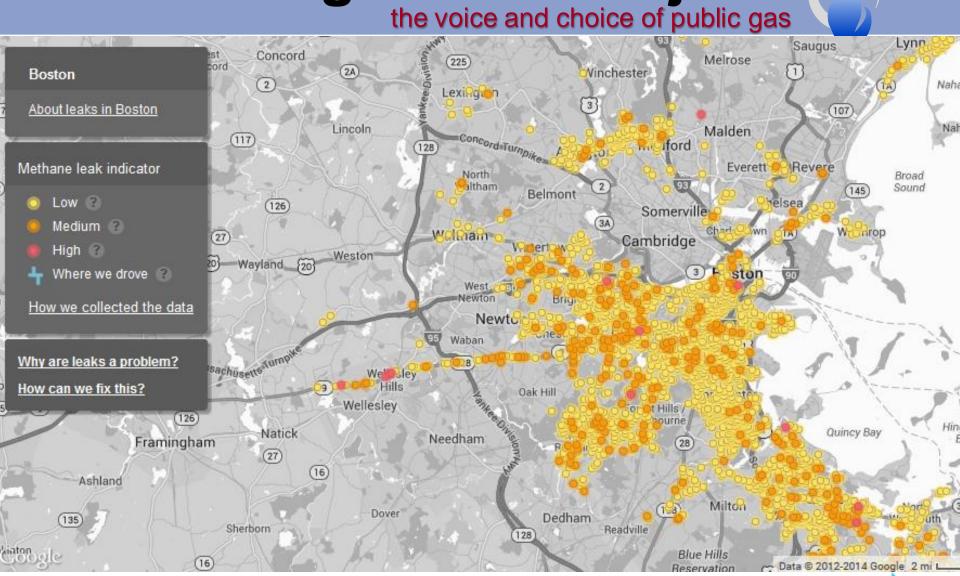
Methane Emissions



- Pressure is on to replace bare steel and cast iron and repair leaks, not just for safety, but because methane is a greenhouse gas
- Environmental Defense Fund and Google collaborating on mapping methane leaks
- Appears to be setting the stage for EPA to regulate gas industry leak repair practices
- And possibly define "Best Available Technology" for gas leak detection as something other than our current equipment (FI, CGI)

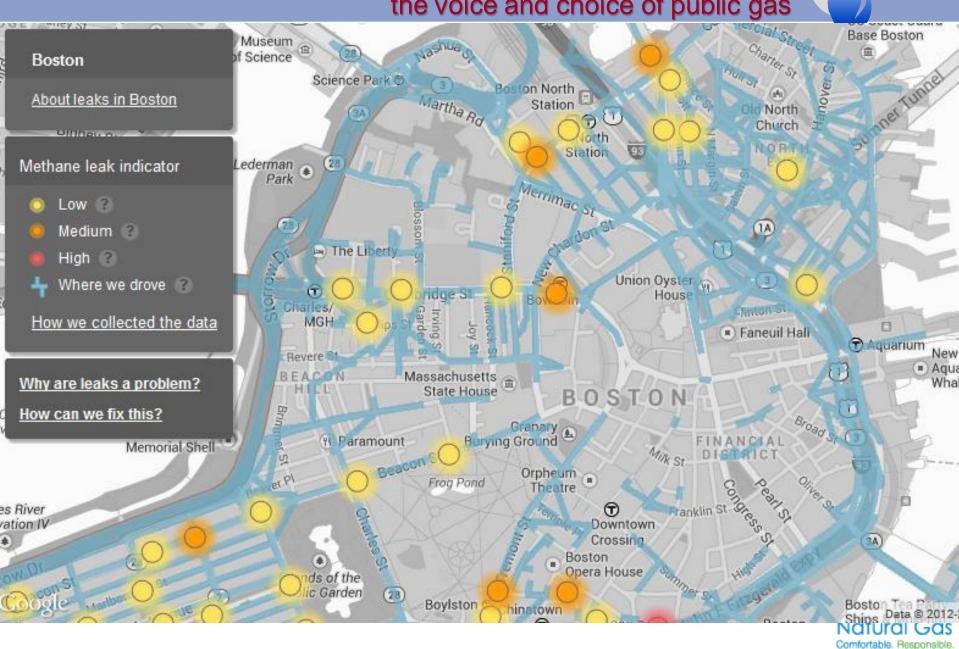


EDF-Google Leak Project

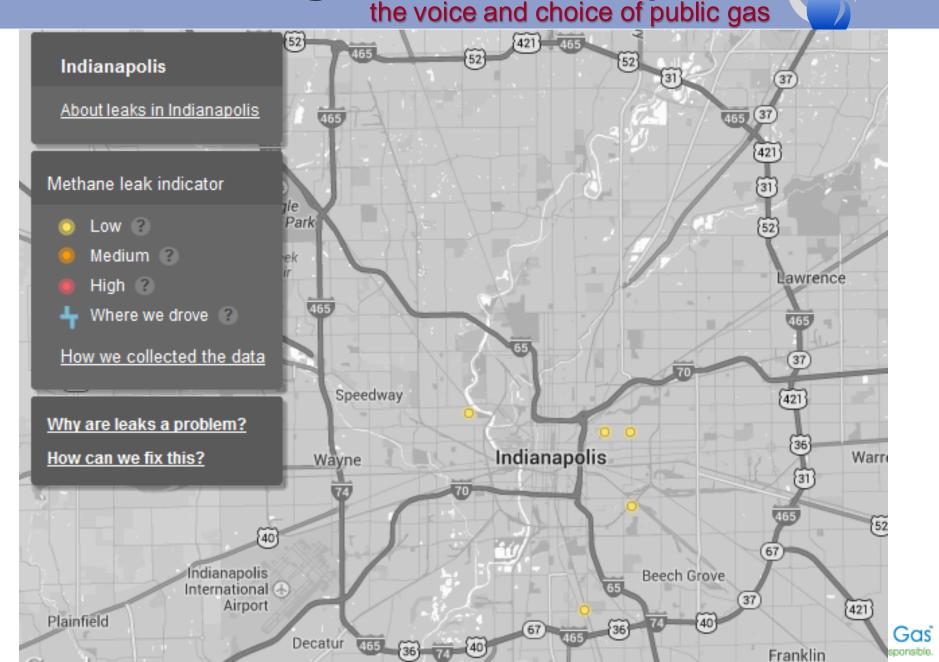




EDF-Google Leak Project the voice and choice of public gas



EDF-Google Leak Project the voice and choice of public gas



Support Finding/Fixing Leaks

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- APGA supports finding and fixing leaks
- APGA supports accelerated replacement of cast iron and bare steel
- APGA does not want another layer of regulation of leakage surveys, with both PHMSA and EPA involved
- APGA does not want EPA to specify that spectrographs are "Best Available Technology")



Questions?

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